NITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Offi-Address: COMMISSIONER FOR PATENTS

P O Box 1450 Alexandria, Virgima 22313-1450 dexaneria, Vi zww.uspło.go

### NOTICE OF ALLOWANCE AND FEE(S) DUE

38107 7590 12/30/2009

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P. O. Box 3001 BRIARCLIFF MANOR, NY 10510

EXAMINER TABATABAL ABOLFAZI.

PAPER NUMBER ARTHNIT

2624

DATE MAILED: 12/30/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.			
10/597,871	08/10/2006	Thomas Kohler	Thomas Kohler PHDE040044US				
TITLE OF INVENTION: MOTION ARTIFACTS COMPENSATION							

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	03/30/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. <u>PROSECUTION ON THE MERITS IS CLOSED.</u> THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

#### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown

B. If the status above is to be removed, check box 5b on Part B -Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

#### PART B - FEE(S) TRANSMITTAL

# Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE

Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where

appropriate. All further indicated unless correcte maintenance fee notifical	correspondence includir ed below or directed oth tions.	ng the Patent, advance of nerwise in Block 1, by (	rders and notification of a) specifying a new corre	maintenance fees w espondence address;	ill be and/o	mailed to the current (b) indicating a sepa	correspondence rate "FEE ADI	address as DRESS" for
CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)				Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.				
38107	7590 12/30	/2009	nav			-		
P. O. Box 3001	ELLECTUAL PRO IANOR, NY 10510	OPERTY & STAN	IDARDS I h Sta adc trau	Cert ereby certify that thi tes Postal Service w fressed to the Mail asmitted to the USPI	ificate s Fec( ith sul Stop FO (57	of Mailing or Trans s) Transmittal is being ficient postage for firs ISSUE FEE address I) 273-2885, on the d	nission deposited with t class mail in above, or bein ate indicated be	the United an envelope g facsimile low.
							(De	positor's name)
								(Signature)
								(Date)
APPLICATION NO.	TION NO. FILING DATE FIRST NAMED IN			NTOR ATTORNEY DOCKET NO. CONFIRMATION NO.				ION NO.
10/597,871	08/10/2006	'	Thomas Kohler		P	HDE040044US	7319	
TITLE OF INVENTION	: MOTION ARTIFACT	S COMPENSATION						
APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE	FEE	TOTAL FEE(S) DUE	DATE	DUE
nonprovisional	NO	\$1510	\$300	\$0		\$1810	03/30/	2010
EXAM	INER	ART UNIT	CLASS-SUBCLASS	7				
TABATABAI	, ABOLFAZL	2624	382-I28000	-				
Change of corresponde CFR 1.363).	ence address or indicatio	n of "Fee Address" (37	2. For printing on the					
	ondence address (or Cha	nge of Correspondence	(I) the names of up to or agents OR, alternat	o 3 registered patent ively,	attori	ieys 1		
Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.								
"Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.			2 registered patent attorneys or agents. If no name is 3					
		A TO BE PRINTED ON	THE PATENT (print or ty	rpe)				
PLEASE NOTE: Unl	ess an assignee is ident	ified below, no assignee	data will appear on the p T a substitute for filing an	patent. If an assigne	e is io	lentified below, the de	cument has be	en filed for
(A) NAME OF ASSIG		netion of this form is NO	(B) RESIDENCE; (CIT					
(1)111111111111111111111111111111111111	0.122		(a) ILISIDE (CII	r and STITE OR C	00	,		
Please check the appropri	iate assignee category or	categories (will not be po	rinted on the patent):	Individual 🚨 Co.	rporati	on or other private gro	up entity 🔲 (	Jovernment
4a. The following fee(s)	are submitted:	4	b. Payment of Fee(s): (Ple	ase first reapply an	y pre	lously paid issue fee	shown above)	
Issue Fee			A check is enclosed.					
			☐ Payment by credit card. Form PTO-2038 is attached. ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any					
			overpayment, to Dep	osit Account Numbe	r	(enclose a	extra copy of	this form).
5. Change in Entity Stat	tus (from status indicate s SMALL ENTITY statu		☐ b. Applicant is no los	ngor claiming SMAI	LEN	FITV status See 37 Cl	R 1 27(a)(2)	
			d from anyone other than Office.					ther party in
interest as shown by the	records of the United Sta	tes Patent and Trademark	Office.					
Authorized Signature				Date				
Typed or printed name Registratio				Registration N	0			
This collection of inform an application. Confident submitting the complete this form and/or suggesti Box 1450, Alexandria, V Alexandria, Virginia 223	ation is required by 37 C tiality is governed by 35 d application form to the ions for reducing this bu- lirginia 22313-1450. DC	FR 1.311. The informatic U.S.C. 122 and 37 CFR USPTO. Time will vary rden, should be sent to the ONOT SEND FEES OR	on is required to obtain or 1.14. This collection is es depending upon the indi e Chief Information Offic COMPLETED FORMS T	retain a benefit by the stimated to take 12 n vidual case. Any corer, U.S. Patent and O THIS ADDRESS.	ne pub ninute: mment Frader SEN	ic which is to file (and to complete, includin s on the amount of tir nark Office, U.S. Depo D TO: Commissioner	by the USPTC g gathering, pro ne you require urtment of Com for Patents, P.O	to process) eparing, and to complete merce, P.O. Box 1450,

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



### UNITED STATES PATENT AND TRADEMARK OFFICE

#### UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS

P O Box 1450 Alexandra, Virgima 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/597,871	08/10/2006	Thomas Kohler	PHDE040044US 7319		
38107 75	90 12/30/2009	EXAMINER			
PHILIPS INTEL	LECTUAL PROPER	TABATABAI, ABOLFAZL			
P. O. Box 3001		ART UNIT	PAPER NUMBER		
BRIARCLIFF MA	NOR, NY 10510				

DATE MAILED: 12/30/2009

# Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 675 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 675 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

### Application No. Applicant(s) 10/597.871 KOHLER ET AL. Notice of Allowability Examiner Art Unit AROLFAZI TARATARAL 2624 -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308. 1. This communication is responsive to amendment filed on August 10, 2009. 2. The allowed claim(s) is/are 1-20. 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). b) ☐ Some\* c) ☐ None of the: 1. A Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)). \* Certified copies not received: \_\_\_\_\_. Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE. 4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient. CORRECTED DRAWINGS (as "replacement sheets") must be submitted. (a) Including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached 1) hereto or 2) to Paper No./Mail Date (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d). 6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL. Attachment(s) 1. Notice of References Cited (PTO-892) 5. Notice of Informal Patent Application 2. Notice of Draftperson's Patent Drawing Review (PTO-948) Interview Summary (PTO-413), Paper No./Mail Date 3. Information Disclosure Statements (PTO/SB/08), 7. T Examiner's Amendment/Comment Paper No./Mail Date 4. T Examiner's Comment Regarding Requirement for Deposit 8. X Examiner's Statement of Reasons for Allowance of Biological Material Other . /ABOLFAZL TABATABAI/ Primary Examiner, Art Unit 2624

Application/Control Number: 10/597,871 Page 2

Art Unit: 2624

# **Drawings**

 The drawings were received on August 10, 2006. These drawings are accepted by the Examiner.

# **Reasons for Allowance**

- 2. Applicant's amendment/argument (pages 8-11), filed on November 16, 2009, has been fully considered and are persuasive. As a result of amended claims 1, 11 and 12 the art rejection of claims 1-12, have been withdrawn. Therefore, claims 1-20 are allowable.
- 3. The following is an Examiner's statement of reasons for allowance. The prior art independently or in combination fails to teach or suggest, motion artifact compensation comprises (a) selecting projection data corresponding to a first ray and a second ray from the projection data set, wherein the first and second rays are diametrically opposed rays passing through a same object point, generating a motion artifact compensated data set by compensating the projection data set for the motion artifacts on the basis of the difference and generating a motion artifact compensated image by reconstructing the object of interest from the motion artifact compensated projection data set in combination into other elements and features of claim 1; (b) loading the projection data set acquired by means of a rotating source of electromagnetic radiation generating a beam and by means of a radiation detector detecting the beam, wherein projection data corresponding to a first ray and a second ray is selected from the projection data set and the first and second rays are diametrically opposed rays passing

Application/Control Number: 10/597,871 Page 3

Art Unit: 2624

through a same object point, generating a motion artifact compensated data set by compensating the projection data set for the motion artifacts on the basis of the difference and generating a motion artifact compensated image by reconstructing the object of interest from the motion artifact compensated projection data set in combination into other elements and features of claims 11 and 12.

- Claims 1-20 are allowed.
- 5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance.".

### Citation of Relevant Prior Art

- The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
- Hsieh (U. S. 6, 215,841) discloses methods and apparatus for 3D artifact reduction.
- Ching-Ming (U. S. 5,671,263) discloses motion artifact suppression filter for use in computed tomography systems.

## **Contact Information**

 Any inquiry concerning this communication or earlier communications from the Examiner should be directed to ABOLFAZL TABATABAI whose telephone number is (571) 272-7458. Art Unit: 2624

The Examiner can normally be reached on Monday through Friday from 9:30 a.m. to 7:30 p.m. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Samir Ahmed, can be reached at (571) 272-7413. The fax phone number for organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <a href="http://pair-direct.uspto.gov">http://pair-direct.uspto.gov</a>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Abolfazl Tabatabai/

Primary Examiner, Art Unit 2624

December 24, 2009